

CLAIMS

What I claim as my invention is

- 1 Vipul's forward force balloon with firm grip cocktail stent having
spring/spring like structure in its shaft (for transmitting force and maintaining the
alignment)
Balloon will have heatexpansile material and longer nose cone
Zig zag pattern stent with a cocktail of drug coating
- 2 Forward force balloon with firm grip cocktail stent as claimed in claim 1 wherein
the balloon catheter shaft will have spring/spring like structure(metallic or non
metallic).
- 3 Forward force balloon with firm grip cocktail stent as claimed in claim 1 wherein
spring has circular spirals/strands
- 4 Forward force balloon with firm grip cocktail stent as claimed in claim 1
wherein spring has longitudinal strands/spirals
- 5 Forward force balloon with firm grip cocktail stent as claimed in claim 1 wherein
spring has oblique strands/spirals
- 6 Forward force balloon with firm grip cocktail stent as claimed in claim 1 wherein
spring/spring like structure will be in portion with or without the PTCA guide
wire
- 7 Forward force balloon with firm grip cocktail stent as claimed in claim 1 wherein
the segment is straight and PTCA guide wire will not come out of the gaps of
spring like structure
- 8 Forward force balloon with firm grip cocktail stent as claimed in claim 1 will
have spring like structure, will have various lengths and various placements in the
shaft
- 9 Forward force balloon with firm grip cocktail stent as claimed will have stent
structure in zig-zag pattern
- 10 Forward force balloon with firm grip cocktail stent as claimed in claim 9 wherein
stent struts will have flat outer surface

- 11 Forward force balloon with firm grip cocktail stent as claimed in claim 9 wherein zig zag pattern segment length will be short 1-4mm
- 12 Forward force balloon with firm grip cocktail stent as claimed will have a cocktail of heparin(unfractionated/fractionated), IIb/IIIa receptor blocker and a cytostasis agents
- 13 Forward force balloon with firm grip cocktail stent as claimed in claim 12 will have differential release pattern of different drugs
- 14 Forward force balloon with firm grip cocktail stent as claimed in claim 12 will have more drugs at the edges of the stent and especially the proximal end
- 15 Forward force balloon with firm grip cocktail stent will have a balloon with heatexpansile material on outer surface in some parts or whole and longer flexible nose cone(02-20mm)
- 16 Forward force balloon with firm grip cocktail stent as claimed in claim 15 wherein the heatexpansile material will not affect the lumen of balloon
- 17 Forward force balloon with firm grip cocktail stent as claimed in claim 15 wherein the heatexpansile material will not bind with the stent
- 18 Forward force balloon with firm grip cocktail stent as claimed in claim 15 wherein the heatexpansile material will not come off the balloon.
- 19 Vipul's forward force balloon with firm grip cocktail stent substantially as herein described and illustrated in the accompanying drawings.

Dated this 29th day of July, 2003

ABSTRACT OF DISCLOSURE

This balloon catheter will have a special shaft having spring like structure which will help in transmitting the force to distal end and thus helping to cross the tight lesions. The balloon material with help of heatexpansile material will strongly grip the undeployed